Reply to Office Action of March 09, 2005   Appl. No.: 10/014,610
Amendment Dated: April 11, 2005   Attorney Docket No.: CSCO-014/5132

REMARKS

Claims 1-22 were presented for consideration in the application as originally filed.
Claims 1-5, 8-10, 12-15 and 17-20 were rejected and claims 6-7, 11, 16 and 21-22 were
indicated to contain allowable subject matter. Applicants thank the Examiner for the
5   indication of allowable subject matter. Claims 1, 2, 6, 9, 10, 11, 12, 13, 16, 17, 18 and 21
are sought to be amended to further clearly define the invention of the corresponding claims.
The amendments are believed not to introduce new matter, and their entry is respectfully
requested. Reconsideration of the rejected claims is respectfully requested further in view
of the following remarks.

10   *Telephone Interview*

Applicant and the undersigned representative thank Examiner Nguyen for the
telephone interview of April 7, 2005. Only the undersigned representative and Examiner
Nguyen were present in the interview. The undersigned representative thanked the Examiner
for indication of allowable subject matter and also explained substantially the below remarks
15   in contending that all the previously presented claims (1 and 8, in particular) are also
allowable over the art of record. No agreement appeared to have been reached with respect
to independent claims 1 and 8. Reconsideration is requested further in view of the below
remarks.

The Examiner indicated that a duly completed interview summary form PTOL-413
20   would be mailed in due course. It is respectfully requested that a copy of the completed form
PTOL-413 be mailed to the address of record, if one has not been mailed already. It is
believed that the Applicant has met the burden of providing substance of the interview. See
MPEP § 713.04 and 37 CFR § 1.133.

Rejections Under 35 U.S.C. § 103

25   Independent claims 1, 8, 12 and 17 was rejected under 35 U.S.C. § 103(a) as being
unpatentable over Burwell et al (US 5,818,842), hereinafter Burwell. Applicants traverse the
rejection, for reasons noted below.

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For example, independent claim 8 recites:

30   An apparatus for configuring a segment identifier of a virtual circuit in a device, said device being connected to a network, said apparatus comprising:
            a memory designed to provide said segment identifier for transmitting data from said device;
35   a loopback generator *generating a loopback packet using a possible segment identifier in a header of said loopback packet*;
            a port interface coupled to said network, said port interface for *sending said loopback packet on said network*, said port interface *receiving another packet from said network*;
40   a parser coupled to said port interface, said parser examining said another packet to *determine whether said another packet is received in response to said sending said loopback packet*; and
            a configuration block storing said *possible segment identifier as said segment identifier in said memory if said another packet is determined to be received in response to sending said loopback packet*.
45   (Original Claim 8, *Emphasis Added*)

Thus, an apparatus in accordance with claim 8 sends a loopback packet with a possible segment identifier in a header on a network and determines that the possible segment identifier is an accurate segment identifier if the loopback packet is received in response to sending the loopback packet. The possible segment identifier is then configured

50   (stored in the memory, in the above example) for construction of headers while transmitting data from the device.

As a result, the device can be configured with potentially minimal user intervention.

Burwell does not disclose or suggest, either alone or in combination with other references of record, one or more features of claim 8. In particular, Burwell does not disclose

55   or suggest *the combination of (Emphasis Added)* sending a loopback packet on the network and configuring the segment of the sent loopback packet for use as segment identifier in transmitting data from the device if another packet is received in response to sending the loopback packet.

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60   Applicants basis for the assertion in the previous paragraph is briefly explained
below.

It is first noted that Burwell is entitled, "Transparent Interconnector of LANs by an
ATM nework" and the below portion is believed to provide a general summary of broad
operation of the systems of Burwell:

65   According to the present invention there is provided a computer
        communications system comprising an ATM network over which ATM cells are
        transmitted through a plurality of interconnected ATM switches; a plurality of user
        devices attached to the system at least some of said user devices including LAN
        interface adapters for connection to said ATM network through one or more local
        area networks (LANs); interface means *between said ATM network and said user*
70   *devices storing the location of said user devices,* said interface means between said
        ATM network and said user devices that are connected to LANs adapting LAN traffic
        for transport over said ATM network and vice versa; and *a centralized route server*
        connected to said ATM network storing address data pertaining to the location of
        said user devices attached to the system, said centralized route server exchanging
75   *data over said ATM network with said interface means to learn the locations of*
        said user devices and to distribute such information to said user devices so as to
        permit said interface means to establish direct transparent communication on demand
        using a dynamic mesh of ATM connections between a said user device connected
        thereto and another said user device attached to the system.
80   In accordance with the invention the user devices, which may be personal
        computers, can be interconnected over the ATM network using their existing LAN
        adapters. The whole network, including the ATM switch fabric, thus acts as a virtual
        LAN.
        (Col 2 lines 57 through Col 3 line 16 of Burwell, *Emphasis Added*).
85   *Learning* and aging of source addresses requires tree manipulation, and is
        accomplished as a background task with the help of the AXE and Host Processor.
        Newly discovered source MAC frames result in an internal message forwarded to the
        Host Processor, requesting parameters be added to the LUE Source RAM. The Host
        Processor then accesses the LUE RAM through and re-arranges the tree as required.
90   (Col 12, lines 16-23 of Burwell, *Emphasis Added*)

From the above portions of Burwell, it is believed the MAC addresses are
'learned/discovered' as is common in layer-2 forwarding devices. The centralized route
server gathers this information from each device, and distributes the aggregate information
to other devices. Such distribution of information enables transparent interconnection of
95   LANs by ATM.

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The learning/discovery of Burwell is believed to be based merely on examination of source MAC addresses from individual packets (received by the Ridges of Burwell). In other words, there is no disclosure or suggestion for the ridges of Burwell to send a packet and determine whether another packet is received in response to the sent packet, as recited in

100   claim 8.

From the above, it appears that Burwell would have not motivation to suggest the various feature of claim 8. Applicants now address specific portions of Burwell, relied upon by the Examiner.

In page 3, lines 1-3 of the Outstanding Office Action, it has been stated that:

105   a configuration block (29, 40, 41, 43) for storing the *possible segment identifier* as the segment identifier in the memory (col. 11: line 50 - col. 12: line 28; and col. 14: line 64 - col. 15: line 2).

It is believed that what are stored in the disclosure portion above of Burwell are, the MAC and network layer addresses type information (see, lines 62-63 Col 11 of Burwell), and

110   such information generally identifies the end machines (not the segments). There is no disclosure or suggestion to extend the disclosure of Burwell to apply the techniques to segment identifiers, at least as claimed in claim 8.

In page 2, lines 16-18 of the Outstanding Office Action, it has been stated that:

                        a loopback generator (50, 52) generating a loopback packet (OAM
115   cell) using a possible segment identifier (e.g., VCI/VPI) in a header of the loopback packet (col. 6: lines 14-19, lines 32-44);

It is respectfully submitted that cell processing engine 50 and microprocessor 52 of Burwell appear to describe ways to forward/process OAM cells. However, there is no disclosure or suggestion to use such OAM cells processing to determine the segment

120   identifiers (by sending loopback cells with possible segment identifiers in header and storing the possible segment identifier *only if another loopback packet is received as a response*) (*Emphasis Added*), as claimed in claim 8.

Accordingly original independent claim 8 is believed to be allowable over the art of record. Claims 9-10 are allowable at least at dependent on an allowable base claim.

125   Claim 9, at least as sought to be amended, is independently allowable at least as reciting that all the elements of claim 8 are contained within a single device. Even assuming arguendo that multiple systems of Burwell together provide the features of claim 8, there is no disclosure or suggestion in Burwell to implement the combined features in a single device as claimed in amended claim 9.

130   Claim 10, at least as sought to be amended, is allowable at least as reciting that the segment identifier comprises a VP/VPI according to ATM. As noted above, the learning of Burwell is limited to MAC/LAN addresses and accordingly claim 10 is believed to be independently allowable over the art of record.

Claim 1 is also allowable over Burwell and the other references of record. Claim 1

135   recites in relevant parts:

> *sending a loopback packet on said network*, said loopback packet containing *a possible segment identifier in a header*;
> determining that *said possible segment identifier is an accurate segment identifier if said loopback packet is received by said device from said network*; and
> *configuring said accurate segment identifier in said device* such that said

140   accurate segment identifier is provided for construction of headers while transmitting data from said device.
(Currently Amended Claim 1, *Emphasis Added*)

Thus, a method in accordance with claim 1 sends a loopback packet (having a

145   possible segment identifier in a header) on a network and determines that the possible segment identifier is an accurate segment identifier if the loopback packet is received back from the network. In other words, the possible segment identifier is determined as an accurate segment identifier only if the loopback packet (sent earlier on the network) is received back from the network.

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150   For reasons noted above, the learning of Burwell appears to be based merely on
(passive) learning of MAC/LAN addresses. Accordingly, there is no disclosure or suggestion
in Burwell (or other references of record) to determine that a possible segment identifier is
an accurate segment identifier by sending a loopback packet (containing the possible
segment identifier in the header) on a network and receiving the same on the network.

155   Accordingly, claim 1 is also allowable over the art of record. Claims 2-5 are also
allowable at least as depending from an allowable base claim 1. Claim 3 is independently
allowable at least for reasons noted above with respect to claim 10.

The remaining independent claims 12 and 17 are also allowable at least for some of
the reasons noted above. The dependent claims are allowable at least as depending from
160   corresponding allowable base claims. Accordingly, all the claims presented for consideration
are believed to be allowable over the art of record.

The Examiner is invited to telephone the undersigned representative if it is believed
that an interview might be useful for any reason.

Respectfully submitted,
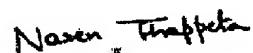
Date: April 11, 2005   _____

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